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09/504,330	02/14/2000	Paul H. Leamon	4889:70	7759

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CARR LAW FIRM, L.L.P.  
670 FOUNDERS SQUARE  
900 JACKSON STREET  
DALLAS, TX 75202

EXAMINER

NGUYEN, CUONG H

ART UNIT

PAPER NUMBER

3625

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No. <b>09/504,330</b>	Applicant(s) <b>Leamon</b>
Examiner <b>Cuong H. Nguyen</b>	Art Unit <b>3625</b>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

1)  Responsive to communication(s) filed on Feb 5, 2003

2a)  This action is FINAL. 2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

### Disposition of Claims

4)  Claim(s) 1-32 is/are pending in the application.

4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-32 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved.

12)  The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. § 119

13)  Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a)  All b)  Some\* c)  None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

14)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

### Attachment(s)

15)  Notice of References Cited (PTO-892) 18)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_

16)  Notice of Draftsperson's Patent Drawing Review (PTO-948) 19)  Notice of Informal Patent Application (PTO-152)

17)  Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 20)  Other: \_\_\_\_\_

**DETAILED ACTION**

1. This Office Action is the answer to the response received on 2/05/2003, which paper has been placed of record in the file.
2. Claims 1-32 are pending in this application.

**Response**

3. The examiner withdraws 35 USC 112, 2<sup>nd</sup> para. of claims 1, 6-7 due to those claims are further clarified in the amendment. The previous rejections on prior art of 35 USC 102(b) and 35 USC 103(a) also were withdrawn due to the amendment received on 2/05/2003; therefore, the examiner's arguments for the paper received on 2/05/2003 are considered moot. However, new ground of rejections on 35 USC 103(a) are applied for a combination of **Crockett** (US Pat. 5,325,292 - published on 6/28/1994) (please note that this patent already have become a public property prior to filing this pending application), in view of **Maggie Klenke**. The applicant argues that "there is no disclosure of forecasting for future contacts", the examiner submits that **Klenke's** article would contribute to future use of ACD (i.e., forecasting future contacts using current data, see **Klenke**, page 48, 1<sup>st</sup> col., lines 8-19, 2<sup>nd</sup> col., lines 8-9, and lines 20-25).

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crockett (US Pat. 5,325,292), in view of Maggie Klenke's article.**

A. Re. To claims 1, 6-7, 17: These claims are rejected under 35 U.S.C. 103(a) as being unpatentable over Crockett (US Pat. 5,325,292), in view of Maggie Klenke's article.

Crockett & Klenke teach similar claimed concepts of this pending invention.

Crockett fails to expressly use claimed languages. However, **Klenke** further teaches a method of allocating and scheduling in a skill-based contact center environment organized into a hierarchy of a business unit at a 1<sup>st</sup> level, a contact types at a 2<sup>nd</sup> level, and a management unit at a 3<sup>rd</sup> level (see **Klenke** pg.43, 1<sup>st</sup> col., lines 47 to 2:3), comprising:

- creating a set of given contact allocations that define how contacts are distributed from a given business unit to multiple contact types, this creation can give a range for minimum to maximum allocations (see **Klenke** pg.48, 1<sup>st</sup> col., lines 39-41, pg.48, 1<sup>st</sup> col., lines 43 to 2<sup>nd</sup> col., line 3, and pg.49, 1<sup>st</sup> col., lines 14-32);

- creating a set of given requirement allocations that define how agent requirements are distributed from a contact type to a management unit; (see **Klenke**, Table 1); and
- allocating forecasted contacts and forecasted agent requirements based on the given contact and requirement allocations (see **Klenke**, Table 2); although Klenke does not expressly spell-out that "allocating forecasted contacts and forecasted agent requirements based on the created contact and requirement allocation", this table obviously suggest that Klenke perceived above claimed limitation (i.e., forecasting future contacts using current data, see **Klenke**, page 48, 1<sup>st</sup> col., lines 8-19, 2<sup>nd</sup> col., lines 8-9, and lines 20-25).

It would be obvious to one with ordinary skill in the art that this problem was raised and solutions were suggested in **Crockett** patent, and further explaining with **Klenke's** article wherein the goal of automated call distributor (ACD) technology has always been to spreading incoming calls among call center agents so that each agent would handle, and equitable share of the load and a caller would have a best chance of being served quickly. The combination of **Crockett** and **Klenke** would teach that a new kind of thinking (i.e., skills-based routing) has entered the call center arena. It would takes ACDs one step further and ensures that an incoming call is routed to the available agent whose skills are best matched to the caller's needs.

B. Re. To claim 2: Crockett & Klenke suggest all limitations of claim 1. **Klenke** further suggests given contact allocations are minimum contact location (see **Klenke**, pg.48, 42-43; and pg.51, 1<sup>st</sup> col., lines 1-3).

C. Re. To claims 3, 19, 21: Crockett & Klenke suggest all limitations of claims 2, 17. **Klenke** further suggests given requirement allocations are minimum agent requirement allocations (see **Klenke**, pg.48 1<sup>st</sup> col., lines 42-48 pg.50, 2<sup>nd</sup> col., lines 29-32, and pg.51 1<sup>st</sup> col., lines 1-3).

D. Re. To claim 4: Crockett & Klenke suggest all limitations of claim 1. **Klenke** further suggests given contact allocations are maximum contact allocation (see **Klenke**, pg.50, 1<sup>st</sup> col., lines 41-43, 2<sup>nd</sup> col., lines 4-8, and 15-19).

E. Re. To claims 5, 19, 21: Crockett & Klenke suggest all limitations of claims 4, 17. **Klenke** further suggests given requirement allocations are maximum agent requirement allocations (see **Klenke**, pg.48, 2:36-39, pg.50, 2<sup>nd</sup> col., lines 15-19).

F. Re. To claim 8: Crockett & Klenke suggest all limitations of claim 1. **Klenke** further suggests allocating forecasted contacts and forecasted requirements (see **Klenke**, pg.51, 1<sup>st</sup> col., lines 20-23).

G. Re. To claim 9: Crockett & Klenke suggest all limitations of claim 8. **Klenke** further suggests predicting the agent availability data (see **Klenke**, pg.51, 1<sup>st</sup> col., lines 20-23).

H. Re. To claims 10, 18, 25, 29, 32: Crockett & Klenke suggest all limitations of claims 9, 17, 22, 26, 30. **Klenke** further suggests agent availability data is predicted by a schedule simulation (see **Klenke**, pg.51, 1<sup>st</sup> col., lines 49-56).

I. Re. To claim 11: Crockett & Klenke suggest all limitations of claim 8. **Klenke** further suggests agent availability data is characterized by contact type (see **Klenke**, pg.51, 2<sup>nd</sup> col., lines 37-39).

J. Re. To claim 12: Crockett & Klenke suggest all limitations of claim 1. **Klenke** further suggests generating agent schedules for the management units (see **Klenke**, pg.51, 1<sup>st</sup> col., lines 49-56).

K. Re. To claim 13: Crockett & Klenke suggest all limitations of claim 1. **Klenke** further suggests a management unit is a collection of agents located at a given contact center location (see **Klenke**, pg.48, 1<sup>st</sup> col., lines 1-18).

L. Re. To claim 15: Crockett & Klenke suggest all limitations of claim 1. **Klenke** further suggests a contact center environment is a contact center environment is a telephone call center (see **Klenke**, pg.48, 1<sup>st</sup> col., lines 1-18).

M. Re. To claim 16: Crockett & Klenke suggest all limitations of claim 1. **Klenke** further suggests a contact center environment is a contact center that handles a contact selected from the group consisting of: telephone

calls, voice mails (see **Klenke**, pg.48, 1<sup>st</sup> col., lines 1-18).

N. Re. To claims 17, 22: Crockett & Klenke suggest an allocation method operative in a skill-based call center environment; comprising:

- organizing the call center environment into a hierarchy of one business unit at a first level, one call types at a second level, and a set of one management unit at a third level; and allocating a percentage of incoming calls from a given business unit to one call type (see **Klenke**, pg.48, 1<sup>st</sup> col., lines 39-41, 1<sup>st</sup> col., line 43 to 2<sup>nd</sup> col., line 3; and 2<sup>nd</sup> col., lines 20-25); and allocating agent requirements for a given call type to one management unit (see **Klenke**, pg.48, 2<sup>nd</sup> col., lines 4-12).

O. Re. To claim 26, 30: Crockett & Klenke suggest an allocation method operative in a skills-based contact center environment comprising:

- organizing the contact center environment into a hierarchy of zero business unit at a first level, one contact type at a second level, and a set of one management units at a third level (see **Klenke**, pg.49, 2<sup>nd</sup> col., lines 32-38); and

- allocating agent requirements for a given contact type to one management unit (see **Crockett** 7:5-23, and 17:44-57).

Klenke fails to disclose about allocating a percentage of contacts from a given business unit to one contact type.

However, **Crockett** suggests to use of percentage of calls in an ACD center to one contact type for his calculations (e.g., see **Crockett** 17:52-58).

It would be obvious to one with ordinary skill in the art that this problem was raised and solutions were suggested in **Crockett** patent and supporting with **Klenke**'s article wherein the goal of automated call distributor (ACD) technology has always been to spread incoming calls among call center agents so that each agent handled and equitable share of the load and the caller had the best chance of being served quickly. The combination of **Crockett** and **Klenke** would teach that a new kind of thinking (i.e., skills-based routing) has entered the call center arena. It would takes ACDs one step further and ensures that an incoming call is routed to the available agent whose skills are best matched to the caller's needs.

P. Re. To claim 20: **Crockett** & **Klenke** suggest all limitations of claim 17, wherein said given call allocations and the given requirement allocations are maximum values (see **Klenke**, pg.50, 2<sup>nd</sup> col., lines 15-19).

Q. Re. To claim 21: **Crockett** & **Klenke** suggest all limitations of claim 17, given call allocations and the given requirement allocations are minimum and maximum values (see **Klenke**, pg.50, 2<sup>nd</sup> col., lines 15-19).

R. Re. To claims 14, 23, 27, 31: **Crockett** & **Klenke** suggest all limitations of claims 13, 22, 26, 30. **Klenke** further suggest a given management unit is a collection of agents at

least some of which are multi-skilled (see **Klenke**, pg.49, 1<sup>st</sup> col., lines 26-30 and pg.50, 1<sup>st</sup> col., lines 38-40).

S. Re. To claims 24, 28: Crockett & Klenke suggest all limitations of claims 22, 26. **Klenke** further suggests a given call type is associated with a given automatic call distributor (ADC). This obviously contains that a given contact type is associated with a given automatic work distributor (see **Klenke**, pg.49, 1<sup>st</sup> col., lines 6-10).

T. Re. To claims 25, 29: Crockett & Klenke suggest all limitations of claims 22, 26. **Klenke** further suggests allocating agent requirements further include predicting agent availability data using a schedule simulation\_(see **Klenke**, pg.48, 2<sup>nd</sup> col., lines 36-39, and pg.51, 1<sup>st</sup> col., lines 49-56).

The examiner submits that all claimed limitations are well-known in the art relating to ACD, one reason is because these claimed limitations are very broad that they are easily recognized by artisan in the art to be ability/features of an ACD system and said components would perform claimed tasks/steps; cited prior art's limitations are not necessary spelled-out exactly claimed languages, because cited prior art is also directed to a similar process/system for ACD communication. It is reasonable that modifications of the described method or system of the cited prior art would be apparent to those skilled in the art without departing from the scope and spirit of cited references.

**Conclusion**

5. Claims 1-32 are unpatentable; a final rejection is necessitated due to an amendment received on 2/05/2003.

6. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. These references are related to the claimed subject matter:

- **Crockett** (US Pat. 5,325,292, published on 6/28/1994) about a tour/schedule generation for a force management system.
- From <http://www.findarticles.com>, "TotalNet call routing from IEX adds support for IP Technology", Business Wire, 11/14/2000.

- From <http://www.findarticles.com>, "IEX wins call center news service editor's choice award; TotalNet call routing praised for Multi-Vendor capabilities", Business Wire, 9/26/2000.
- From <http://www.findarticles.com>, Fukunaga, "Staff scheduling for inbound call centers and customer contact centers", AI Magazine, Winter 2002.
- Fletcher et al., (EP0353102 - 1/31/1990), teach about automatic call distribution (ACD) switching system having distributed processing capability.
- Shinichi, JP2001119485 - 4/27/2001, teaches a method of automatic to automatically distribute incoming calls.
- Flockhart et al., (EP1126731 - 8/22/2001), teach a customer controlled network routing to automatic call distribution system.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cuong H. Nguyen whose telephone number is 703-305-4553. The examiner can normally be reached on Mon.-Fri. from 7:15 AM to 3:15 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Wynn Coggins, can be reached on (703) 308-1344.

Any response to this action should be mailed to:

Amendments

*Commissioner of Patents and Trademarks  
Washington D.C. 20231*

or faxed to:

(703)305-7687 [Official communications; including After Final communications labeled "Box AF"]

703-746-5572 (RightFax) Informal/Draft communications, labeled "PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to Crystal Park 5, 2451 Crystal Drive, Arlington, VA, 7<sup>th</sup> floor receptionist.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Receptionist whose telephone number is (703) 308-1113.

*Cuongnguyen*  
April 17, 2003